

**DISTRIBUTED LOAD TRANSMISSION LINE MATCHING NETWORK**

**ABSTRACT OF THE DISCLOSURE**

- An apparatus and method for maximizing ac energy delivered to a load
- 5 by minimizing energy reflected from a load, such as an RF power source coupled to a plasma load for substrate processing chambers, including a matching network, wherein the matching network couples an ac power source and load. The matching network having two transmissions lines that are inductively coupled for a fixed portion of their length, such length being at least one wavelength of the ac energy generated by the ac
  - 10 power source. The matching circuit providing continuously variable impedance matching through the use of fixed components.

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